

creating a multi-tone acoustic signal in the form of PCM modulated first digital audio samples;

transmitting the PCM modulated first digital audio samples via the RF link;

converting the PCM modulated first digital audio samples [signals] to an analog audio waveform such that the analog audio waveform is the acoustic equivalent of the PCM modulated first digital audio samples;

acoustically emitting the analog audio waveform via a loudspeaker;

in the RF equipped [POS] Point-of-Sale device:

receiving the PCM modulated first digital audio samples via the RF link;

receiving the analog audio waveform via a microphone;

converting the analog audio waveform to PCM modulated second digital audio samples;

comparing the PCM modulated first digital audio samples against the PCM modulated second digital audio samples to determine if they match, and if the PCM modulated first digital audio samples match the PCM modulated second digital audio samples, then

determining the distance between the portable wireless communication device and the RF equipped [POS] Point-of-Sale device based on the known speed of propagation of radio waves, the known speed of sound, and the time difference between the arrival of the PCM modulated first digital audio samples and the acoustic signal.

2. (Cancelled)

3. (Previously amended) The method of claim 1 wherein the RF link is Bluetooth™.

4. (Currently Amended) The method of claim 1 further comprising terminating an exchange of further radio messages between the portable wireless communication device and the RF equipped [POS] Point-of-Sale device if the distance between the two devices is greater than a threshold value.

5. (Original) The method of claim 1 further comprising terminating the performance of a financial transaction if the distance determined is greater than a threshold value.

6. (Currently Amended) In a portable wireless communication device, a method of determining the distance between the portable wireless communication device and a RF equipped [POS] Point-of-Sale device, the RF equipped [POS] Point-of-Sale device capable of emitting a multi-tone acoustic signal and transmitting a pulse code modulation (PCM) radio signal that is a digitized version of the multi-tone acoustic signal, the method comprising:

receiving the digitized version of the multi-tone acoustic signal in the form of PCM modulated first digital audio samples via an RF link;

receiving the multi-tone acoustic signal via a microphone;

converting the received multi-tone acoustic signal to PCM modulated second digital audio samples;

comparing the PCM modulated first digital audio samples against the PCM modulated second digital audio samples to determine if they match, and if the PCM modulated first digital audio samples match the PCM modulated second digital audio samples, then

determining the time difference between the arrival of the PCM modulated first digital audio samples and the multi-tone acoustic signal; and

determining the distance from the RF equipped [POS] Point-of-Sale device based on the known speed of propagation of radio waves, the known speed of sound, and the time difference between the arrival of the PCM modulated first digital audio samples and the multi-tone acoustic signal.

7. (Cancelled)

8. (Previously Amended) The method of claim 6 wherein the RF link is Bluetooth™.

9. (Currently Amended) A portable wireless communication device capable of determining the distance between itself and a RF equipped [POS] device wherein the RF equipped [POS] Point-of-Sale device emits a multi-tone acoustic signal and transmits a corresponding pulse code modulation (PCM) radio signal in the form of first digital audio samples, the portable wireless communication device comprising:

an RF module that receives the PCM modulated first digital audio samples via an RF link;

a microphone that receives the multi-tone acoustic signal;

a CODEC that converts the received multi-tone acoustic signal to PCM modulated second digital audio samples; and

a processor that:

compares the PCM modulated first digital audio samples against the PCM modulated second digital audio samples to determine if they match, and if the PCM modulated first digital audio samples match the PCM modulated second digital audio samples, then

determines the time difference between the arrival of the PCM modulated first digital audio samples and the multi-tone acoustic signal; and

determines the distance from the RF equipped [POS] Point-of-Sale device based on the known speed of propagation of radio waves, the known speed of sound, and the time difference between the arrival of the PCM modulated first digital audio samples and the multi-tone acoustic signal.

10. (Cancelled).

11. (Previously Amended) The portable wireless communication device of claim 9 wherein the RF link is Bluetooth™.

12-14 (Cancelled).